

REMARKS

Reconsideration of the present application in view of the above amendments and following remarks is respectfully requested.

Status of the Claims

Claims 11-21 are presented. Claims 11, 14, 16 and 19 are amended for clarity. Claims 11 and 19 are further amended to indicate that at least one dimerdiol (meth)acrylate is added to flat the coating, and that the substrate comprises glass. Support is found throughout the specification as originally filed. Claims 17-18 and 20-21 are cancelled without prejudice to pursuing claims of the same or similar scope in a continuation or divisional application, or during future prosecution of the present application. No new claims are added.

No new matter has been introduced.

Summary of the Invention as Claimed

As presently amended, claims 11-16 are directed to a process for producing a flattened coating comprising (a) introducing into a self-curing or radiation-curing coating system **at least one** liquid dimerdiol (meth)acrylate in an amount effective to flat the coating system, the dimerdiol (meth)acrylate having a degree of esterification of at least 50%, (b) applying a coating of the flattened coating system to a substrate **comprising glass**, and (c) curing the coating, wherein the cured coating is flattened with respect to the same coating without the **at least one** dimerdiol (meth)methacrylate.

Claim 19 is directed to a method for flattening a substrate surface **comprising glass**, comprising the steps of applying a self-curing and/or radiation-curing coating system to a surface **comprising glass**, and curing, wherein the coating system comprises **at least one liquid** dimerdiol (meth)acrylate having a degree of esterification of at least 50%, in an amount effective to flat the cured coating.

Nonstatutory Double Patenting Rejection

Previously pending claims 11-21 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 15-26 of copending Application No. 10/553,483, Attorney Docket No. C 2632 US (P40046 USA). Since there has been no indication of allowable subject matter, and in view of the provisional nature of this rejection, applicants respectfully request that they will consider the filing of an appropriate terminal disclaimer when and if allowable subject matter is indicated to exist in the present application. Accordingly, the Examiner is respectfully requested to hold this rejection in abeyance until the prosecution of 10/553,483 and the present application are each more advanced.

Rejections under 35 U.S.C. § 103(a)

As an initial matter, it is clear from the Final Office Action that the Examiner does not understand the technical term "dimerdiol". As disclosed in the specification (page 4, lines 7-28), dimerdiols are well-known compounds to those skilled in the art, and are commercially available. These diols are obtained by the reduction of dimer fatty acids or dimer fatty acid esters. The dimer fatty acids themselves are obtained by oligomerization of unsaturated fatty acids (e.g. oleic acid, linoleic acid, erucic acid) in the presence of catalysts to form mixtures of cyclic dimers of well-defined structure, via Diels-Alder type reactions. For example, linoleic acid (C18) is dimerized using this procedure to provide cyclohexene-containing C36 diacids. For specific structures the Examiner is referred to Newton, Specialty Chemicals, 1984, May, pp. 17-24, (dimer acids) and Daute, et al., Fat Sci. Technol., 1993, 95 (3), pp. 91-94 (English abstract; dimerdiols), both of which are cited on page 4 of the specification, and were provided in the IDS.

Thus the "dimers" of "dimerdiols" are specific cycloaliphatic structures, and are not just any dimer, for example as represented in the structures of bisphenol

A or dipropylene glycol. Thus "dimerdiol (meth)acrylates", as known in the art, are **not** represented by dipropylene glycol diacrylate (DPGDA) or Photomer 3016.

Previously pending claims 11-13, 15, 17 and 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mochizuki et al. (JP 10-218946, "Mochizuki"). Applicants respectfully traverse the rejection.

Mochizuki discloses heat- or energy-curable compositions containing (a) (meth)acrylate esters of dimerdiol **alkoxylates** of a specific formula, (b) dimerdiol (meth)acrylates, and, optionally, (c) radical-polymerizable monomers. Mochizuki provides no indication of the **flattening** properties of either the alkoxylated or unalkoxylated (meth)acrylates of dimerdiol, but is instead drawn to hardenability (hardness) and water resistance properties. Further, Mochizuki is silent concerning glass as a substrate.

Even though applicants do not necessarily agree with the Examiner's characterizations of Mochizuki, in order to further prosecution, the claims have been amended in a manner to obviate the rejection. Thus, the claims have been amended to specify that the substrate comprises glass, on which the flattening effect is particularly pronounced (specification, page 5, lines 21-23).

Therefore, in view of these amendments, the now-pending claims define novel and patentably non-obvious subject matter over the cited art.

Previously pending claims 11-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Morea-Swift (WO 98/58030). Applicants respectfully traverse the rejection.

As acknowledged by the Examiner, Morea-Swift discloses DPGDA (dipropylene glycol diacrylate) as one possible component of a lacquer/paint base, but fails to disclose any **dimerdiol** (meth)acrylate component, as required

by applicants. As discussed above, DPGDA is **not** a dimerdial (meth)acrylate as commonly understood in the art. Further, DPGDA is described as a matting monomer **in concert with a solid flattening** agent such as amorphous silica. There is no indication that DPGDA itself is effective as a flattening agent in the **absence** of an additional solid flattening agent (e.g. silica). Thus applicants' invention is distinguished over Morea-Swift in both the presence of the required *bona fide* **dimerdial** (meth)acrylate, and the flattening activity in the absence of a solid flattening agent, which solid flattening agent is not required in applicants' invention in order to achieve the flattening effect.

Previously pending claims 11-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Thames et al. (US 6,001,913; "Thames"). Applicants respectfully traverse the rejection.

As acknowledged by the Examiner, Thames discloses Photomer 3016 (bisphenol-A-diglycidyl ether diacrylate) as one possible component of a lacquer/paint base, but fails to disclose any *bona fide* **dimerdial** (meth)acrylate component, as required by applicants. As discussed above, Photomer 3016 is **not** a dimerdial (meth)acrylate as commonly understood in the art. Further, Photomer 3016 is not disclosed as a matting/flattening monomer itself. Thus applicants' invention is distinguished over Thames in both the presence of the required dimerdial (meth)acrylate, and the absence in Thames of any disclosed flattening activity. In the absence of any *bona fide* dimerdial (meth)acrylate, there can be no inherent flattening activity, since Photomer 3016 itself is not a flattening agent.

Previously pending claims 11-13, 15 and 17-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gloster et al. (US 2004/0006157; "Gloster"). Applicants respectfully traverse the rejection.

Gloster discloses Photomer 4226 (dipropylene glycol diacrylate) as one possible component of a 100% solids UV-curable ink, but fails to disclose any *bona fide* **dimerdiol** (meth)acrylate component, as required by applicants. As discussed above, DPGDA is **not** a dimerdiol (meth)acrylate as commonly understood in the art. Further, Photomer 4226 is not disclosed as a matting/flatting monomer itself. Thus applicants' invention is distinguished over Gloster in both the presence of the required dimerdiol (meth)acrylate, and the absence in Gloster of any disclosed flatting activity. In the absence of any *bona fide* dimerdiol (meth)acrylate, there can be no inherent flatting activity, since Photomer 4226 itself is not a flatting agent.

In toto, there is simply no disclosure of **flatting activity** for *bona fide* dimerdiol (meth)acrylates, with or without other components. Specifically, there is no disclosure relative to applicants' claims as presently amended, drawn to a process for producing a flattened coating on a glass substrate, the flattened coating containing at least one *bona fide* liquid dimerdiol (meth)acrylate; or drawn to a method for flatting a substrate surface comprising glass, using a coating system comprising at least one *bona fide* liquid dimerdiol (meth)acrylate. Applicants' processes and methods are therefore novel and patentably unobvious over the cited art.

Conclusion

In summary, in view of the Examiner's misunderstanding of the technical art with regard to dimerdiols/dimerdiol (meth)acrylates, and her misapplication of the cited art in light of this misunderstanding, applicants' believe that the finality of the present rejections is inappropriate, and should be withdrawn. Therefore, applicants' respectfully request that the finality of the present office action be withdrawn.

Further, in view of the above claim amendments and remarks, applicants believe that, even in the event that the Examiner does not agree to withdraw the finality of the office action, all of the pending claims as presently amended are in condition for allowance, or alternatively, in better condition for examination on appeal. Therefore, the Examiner is respectfully requested to enter the amendments, reconsider, withdraw the rejections and allow the claims.

If any additional fees are required in support of this application, authorization is granted to charge our Deposit Account No. 50-1943.

Respectfully submitted,

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Date

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